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The Insertion of the Capsular Ligament of the Hip-Joint, and its Relation to Intra-Capsular Fracture of the Neck of the Femur.

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DISCUSSION UPON THE FOREGOING PAPER IN THE SURGICAL SECTION OF THE NEW YORK ACADEMY OF MEDICINE. DR. JAMES R. WOOD, CHAIRMAN.

Stated Meeting, November 22, 1861.

Dr. George K. Smith, of Brooklyn, having at a previous meeting read an elaborate and interesting paper on the "Relation of the insertion of the capsular ligament to intra-capsular fracture of the neck of the femur," opened by appointment the discussion upon it by reviewing the whole subject briefly as follows:—

In opening the discussion I propose to mention, briefly, some of the reasons why different surgeons, equally honest in their search for truth, and equally competent to judge of the points at issue, have hitherto been so much at variance in the investigation of this subject; and afterward read the summary of my paper.

The *first* of these reasons is, that different surgeons have located the posterior insertion of the capsular ligament at different points—some at the middle of the posterior surface of the neck, some as far remote as the shaft of the bone, and others at all points intermediate between these two extremes; so that a fracture, located three-fourths of an inch distant from the posterior inter-trochanteric line, would, in the opinion of one surgeon, be extra-capsular, while, in the opinion of another surgeon, it would be entirely included by the capsule. *Second*, surgeons have not seemed to be aware of the fact that the insertion of the capsular ligament is removed by the morbid changes which occur as a consequence of the fracture. This circumstance has given rise to the following difference of opinion. The surgeons who have made autopsies, after union of a fracture of the neck, have found the line of union included by the capsule of the specimen, even after the removal of the entire neck by absorption. In this circumstance they have found (as they supposed) positive evidence that the fracture, and its subsequent union, were intra-capsular. Having determined this point, they have macerated the specimen to prove that the bond of union was composed of bony material; and when, after maceration, the bone has been viewed by other surgeons, some, finding the line of union close to the shaft of the bone, believed it to be intra-capsular; while others, who found the line of union equally close to the head of the bone, interpreted its proximity to the head in favor of an extra-capsular fracture. Mr. Jones's case furnishes a fine illustration of this difference of opinion. Mr. Jones states that

"On dissection, the capsule was found very much thickened, and it was not until the shaft of the bone was divided that the knife could be passed around the joint, so contracted was the space between the trochanter major and the edge of the acetabulum. The direction of the fracture could not be traced, or the bond of union made out, until the bone had been macerated. As portions of the capsule became loose, they were removed by the forceps, which enabled me to discover, what I believe to be the case, that the fracture occurred entirely within the capsule."

After maceration the bone was presented to Sir Astley Cooper for inspection. He was of opinion that

"The fracture was in part within, and in part external to the capsular ligament; in part united,

and in part not, and the neck of the thigh-bone absorbed."

The following is Mr. Stanley's history of Jones's case:—

"The history of the case is clearly that of fracture of the neck of the femur; the appearances of the bone show that there has been a fracture which has reunited by an osseous medium, and the direction of the fracture is such as, in my opinion, can permit no doubt that it was confined to the portion of the neck of the bone covered by synovial membrane; consequently, that it was wholly within the capsule. The fracture extends through the basis of the head of the bone in the line of its junction with the neck. As in other cases of the same kind, a great part of the neck has disappeared, and in consequence the head is proportionately nearer to the trochanter major and shaft of the bone; *its reunion has*, in fact, taken place in part to the remaining portion of the neck, and in part to the shaft."

(Dr. Smith here exhibited a plate representing the posterior surface of the specimen, taken from the *Medico-Chirurgical Transactions*.)

For the conclusions to which I have arrived, see summary of the paper on page 540.

Professor Wood has suggested that I should give a brief review of the specimens of union within the capsule which have been reported.

Robert William Smith has reported seven cases of osseous union of this fracture. Four of these cases are not illustrated by the engravings of the specimens, and their histories have failed to assign a definite location to the line of union; therefore, if we admit in either case that the bone was fractured, we have no means of determining whether the line of union was within or without the normal capsule. The histories of three of these cases are also defective in other very important points. Mr. Stanley's case does not show conclusively that the bone was ever fractured, nor does the history state that the patient was treated for a fracture; on the contrary, Mr. Stanley's history of the case shows that most of the surgeons who saw the case believed that, instead of a fracture, there was "a dislocation into the foramen ovale;" also, that the patient was treated for a dislocation. "Extension was made with the pulleys, and the limb moved in different directions, to replace the head of the bone."

In the history of Mr. Swan's case, the only evidence that the neck of the bone was fractured is found in the opinion of Sir Astley Cooper, who, however, acknowledged his inability to detect crepitus, or any other symptoms of fracture, except pain on movement of the limb, and "a slight inclination of the toes outward."* In the history of Mr. Chorley's case, Mr. Smith admits that "a portion of the upper fragment extended in one situation a little external to the capsule;" an admission which at once excludes the specimen from the class under consideration. In each of the three remaining cases reported by Mr. Smith, the appearance of the specimen is represented by engravings, which show that the posterior surface of the neck has been mainly removed by absorption, and that the line of union on this surface is too close to the shaft of the bone to be included by any specimen of the normal capsule. Mr. Smith regards these cases as examples of impacted fracture, in which the fragments have been so locked together that "they have been maintained in contact and at rest;" and states that "it is only under such circumstances that we are to hope for the occurrence of bony consolidation."† The histories of these cases state that the neck has been absorbed, and the engravings show that nearly the whole of the neck has been removed; hence the impaction, which Mr. Smith considers so essential to bony union, must have been loosened by the subsequent absorption. Again, I cannot see how Mr. Smith is able to determine that the fracture was intra-capsular, after so great a portion of the neck has been removed. The line of union in each of these specimens is too near the shaft of the bone to be included by any specimen of the normal capsule I have seen, and I have taken accurate measurements of more than sixty.

Professor Mussey has reported three cases of bony union, in each of which the line of union is shown, both by the history of the case and the engraving of the specimen, to be close to the shaft of the bone; too close to be included by any specimen of the normal capsule. It is evident that he located the posterior insertion of the capsule close to the shaft of the bone, since it must of necessity be so in order to include the line of union in either of his specimens; moreover, he has reported, as illustrations of intra-capsular fracture, two cases of fibrous union in which the whole of the neck has been removed by absorption.

Dr. Smith next reviewed the cases reported by Professor March. He said that as Professor March was present, he hoped to hear something

* Cooper on Dislocations and Fractures of the Joints, p. 157.
† Smith on Fractures, p. 64.

interesting from him on the subject, and would be as brief as possible. He read the history of the first case, and remarked concerning the specimen, that the fracture and its subsequent union were probably within the normal capsule; that about half of the neck had been removed by absorption, and that the remaining half is attached to the shaft; also, that the head of the bone, which appears to be united to the posterior surface of the remaining fragment of the neck, is in reality separated from it by the capsular ligament, which was folded between the two fragments. He then exhibited the specimen, stating that if it were held between the eye and the gas-light, one could see through between the posterior surfaces of the neck and the head, proving that the fragments are not united in that situation, and that only the extremity of the neck is attached to that portion of the head overlapping it. He further stated, that some of the bond of union is composed of fibrous material, but could not say that it was all of that character. He, however, suggested the importance of macerating the specimen to settle that point. He then exhibited Professor March's second specimen, calling attention to the fact that the capsular ligament which has been preserved with the specimen is inserted so far remote that it includes nearly all of the trochanter minor; that the history does not afford conclusive proof that the neck was fractured, and that, if ever broken, the line of union is too near the shaft of the bone to be included by the normal capsule.

He next proceeded to give an account of a case reported by Dr. Holmes, of Canton, Pa. He said that the posterior surface of the neck of the specimen had lost about half of its length by absorption, and that the line of union, as given by Dr. Holmes, was too near the shaft of the bone to be included by any specimen of the normal capsule examined by him. He said that Dr. Holmes had informed him, by letter, that "the specimen had been boiled, and sufficiently tested to satisfy all those who have examined it, of the bony union," and further, that "the capsular ligament is entire on the bone." He thought that the specimen had not been sufficiently tested in this particular; for, if the bone had been boiled long enough to separate a fibrous union, the capsular ligament could not now remain attached to the specimen. He then read the history of Professor Parker's case, and said that there seemed to be no doubt that the bone had been fractured, for the attending surgeon noticed shortening of the limb, eversion of the toes, and detected crepitus on moving the limb. He said that the anterior surface of the neck retained about its normal length, while the posterior surface had been almost completely removed by absorption, and thought that the line of union on this surface could not be regarded as intra-capsular.

In regard to Professor Post's specimen, he regretted that no history of the case could be obtained. The external appearances of the neck were strongly indicative of fracture, with bony union; the sections of the bone, however, gave no evidence of fracture, the cancellated structure of the head and neck being perfect throughout. If the bone was fractured, the line of union was without doubt within the normal capsule.

Professor Alden March, of Albany, (who was present by invitation,) being requested to give his views upon the points before the meeting, remarked that, so far as the question related to the varying points of attachment of the capsule to the os femoris, Dr. Smith's simple and ingenious mode of measurement set the matter at rest. He believed that we should find a difference in the point of attachment at the posterior part of the neck of the bones in the normal and abnormal specimens. He agreed with Dr. Smith, that in all cases of *intra-capsular* fracture, the neck, whether more or less attached to the head or shaft of the bone, was almost or entirely absorbed before any effort at reunion took place, either by ligamentous or bony material. And, furthermore, that as absorption progressed, when it began to encroach upon the attachment of the capsule in its natural site, the attachment gradually receded or was carried outward, so as either to approach closely to or be transplanted into the posterior inter-trochanteric line. This view of the subject, he stated, was supported by the analogy which existed between the pathological conditions of the capsule in those cases, and in those of morbus coxarius. In the latter disease, as the destructive process goes on, the capsule will be carried back upon the face of the bone, to correspond with the enlargement of the acetabulum. He then exhibited several specimens of hip disease, with the capsular ligament thus abnormally attached, which fully illustrated the point referred to. Three specimens of his own, of intra-capsular fracture of the cervix femoris, were next exhibited; the first, to show the rapid absorption of the neck, without any effort at union; the

second, absorption of the entire neck and ligamentous union at a later period; and the third, to illustrate nearly the same amount of absorption as in the other cases, but with *bony union*. The first specimen of fracture was from a white-washer, who fell from a ladder and injured himself in the hip. He was taken to the almshouse, where he died in the course of a few weeks. Dr. March saw the case at the time of the accident, and called it a fracture of the neck of the femur. On making the post-mortem examination, he found, to his surprise, that the neck of the bone had completely disappeared, as if it had been cut out. There was, however, no ligamentous or other attachment of the head to the shaft of the bone.

The second specimen was recently obtained from an almshouse subject, who, in January, 1860, while engaged in sport with other inmates of the institution, was merely thrown upon the injured hip. The attending physician, Dr. Boulevare, (who reported the case to Dr. March,) diagnosticated the injury to be fracture within the capsular ligament. It was treated by placing the fractured limb upon a pillow, and confining the patient on his back for several weeks. In the course of a few months he could get about pretty comfortably by holding on to chairs, tables, etc. with his hands. On the 28th of August, 1861, nearly twenty months after he received the injury, he died from an attack of dysentery.

In the third specimen of intra-capsular fractures, (in which there appeared to be bony union,) there was more of the neck attached to the shaft at the anterior face of the bone than in either of the other specimens, though posteriorly the relation of the head and shaft appeared nearly the same. No history of this specimen could be obtained; it was purchased abroad some years since, with other pathological specimens, for the museum of the Albany Medical College.

A fourth specimen, which he claimed to be an intra-capsular fracture, was also shown. It occurred in a boy ten or twelve years of age, who, from the date of the accident, was always lame. He died at the advanced age of sixty-two years. The history of the case could not be procured, since the attending surgeon died some thirty or thirty-five years before the patient. The non-professional testimony was abundant, and strongly in favor of the nature of the accident assumed. In this case, the line of the fracture on the anterior face of the neck, and in fact on the posterior face, corresponded in a remarkable manner with the last specimen exhibited. The upper part of the thigh-bone of the same subject, from the opposite side, was exhibited, and found to be nearly in a normal condition, with the exception of a slight change in the form of the head of the bone, which must have taken place at an advanced period of life, from chronic arthritic inflammation.

He next exhibited several specimens of extra-capsular fracture of the neck and trochanter, some of which were beautiful examples of that variety called impacted fracture. But one specimen seemed to be peculiar in these particulars—there was little or no distention; no *shortening*, no *inversion*, and but the slightest amount of *eversion;* without doubt, no crepitus could have been detected at the time of the accident, and hence a direct diagnosis would have been almost impossible. He remarked that it was curious to observe that in those specimens (and he thought it would be found true in all other extra-capsular fractures, whether impacted or not) there was no absorption or shortening of the neck. Whereas there was great shortening, and in most instances almost entire absorption of the neck of the bone, when the fracture was within the capsule; while the contrary was the case when the fracture was without the capsule. This being the case, would not the post-mortem condition of the part furnish complete and satisfactory evidence of the nature and situation of the fracture during life?

Dr. March suggested to all present to apply the test of injecting plaster of Paris in all those cases of *suspected intra-capsular* fractures where death occurred at a period remote from the receipt of the injury, that we might ascertain as conclusively in the pathological, as Dr. Smith had done in the anatomical specimen, the precise extent of the attachment of the capsule on the posterior face of the neck of the bone. He also suggested, as a subject worthy of study, and needing explanation, why it is that the bony material of the neck of the femur was so freely and so rapidly absorbed in intra-capsular fracture—and by what means it was accomplished, while the same effect does not follow in other fractures.

Assuming as he did, that in most cases of intra-capsular fracture of the neck of the femur the fracture took place near or close to the head of the bone, and that *all* of the neck on that portion connected with the shaft was absorbed; and that the capsule *recedes* as the destructive pro-

cess goes on, so as to be found in due time attached posteriorly near, or upon the posterior inter-trochanteric line, as has been shown in the specimens exhibited by Dr. Smith, he believed that one of the difficulties in deciding whether a certain fracture was entirely within the capsule was satisfactorily removed. This discussion was calculated to bring two points prominently before the medical public, viz., the *rapid absorption* of the neck of the bone in intra-capsular fractures, and the abnormal connection of the posterior portion of the coxo-femoral capsule.

The specimen of Dr. Holmes, to which Dr. Smith had referred, was submitted to the examination of the Medical Society of the State of New York, at its session of 1860. Dr. March was of opinion that it was a genuine case of complete intra-capsular fracture, with bony union. But as some of the members of the society seemed to doubt the correctness of this opinion, a committee, consisting of Dr. Brinsmade, of Troy, Dr. Parker, of Poughkeepsie, and the speaker, was appointed, to whom the subject was referred for a critical and thorough examination, both by maceration and the microscope. But the committee never obtained possession of the bone, and reported accordingly at the session of 1861, with the request (suggested by Dr. Holmes) that it be continued, which was done. But up to this time, the committee have neither received the specimen nor heard from its possessor.

The doctor, in conclusion, took occasion to say something about morbus coxarius. He presented several specimens of necrosis of the head of the bone detached from the neck; one from the living subject, from whom it worked out spontaneously, and the patient recovered; and another which had been found in a post-mortem specimen. In a third specimen, about one-third of the head of the bone was found dead, but not entirely cast off. A fourth specimen was exhibited, in which an exfoliation of the head of the bone, somewhat larger than the thumb-nail, was cast off, and extracted through an incision made into the joint at an early period of the disease. This patient also recovered. These specimens, he thought, would go to prove the correctness of his views presented to the medical public in a published paper of the *Transactions of the American Medical Association* for the year 1853, on the Pathology of Hip Diseases, and the mechanical means suggested to prevent progressive absorption. They will, he said, especially help to prove the efficacy of the treatment of my friend, Dr. Sayre, who not only uses extension and counter-extension to relieve the inflamed and tender parts from pressure, but advocates cutting freely into the hip-joint, under certain circumstances. If nature feels the necessity and adopts the means, painful and tedious though they be, to separate the dead head from the shaft of the bone, Dr. Sayre can do it much more speedily and effectually with his knife. The effort, he said, that was made a few years ago, to bring into disrepute the mechanical treatment of hip disease, (as suggested by himself,) and to recommend exercise, and motion of the joint in all stages of the disease, and to rely upon constitutional remedies, seems about as preposterous as would be the treatment of a broken leg without any dressings or means of support, and directing that the individual thus affected should move about and take free out-door exercise.

Stated Meeting, December, 27, 1861.

DR. A. C. POST remarked as follows:—

"I appreciate highly the laborious and scientific investigations, the results of which Dr. Smith has presented to the Section. I believe that they will lead to important modifications of the views which have been entertained by surgeons with reference to the important class of injuries to which they relate. But I am not prepared, without further demonstration, to assent to all the conclusions at which he has arrived. I have no objection to make to either of the first four propositions, as stated by Dr. Smith. The fifth proposition seems to me to be founded on an error, or at least on a statement which has not been demonstrated to be a fact. The statement to which I allude is this, viz., that when the cervix femoris has been fractured, and the fragments have reunited, and the cervix is found on post-mortem examination to be shorter than that of the opposite side, the absorption, to which this shortening is due, preceded the union of the fragments. It appears to me more probable that the union, in such cases, takes place in the first instance, and that the intersititial absorption is a subsequent event. This view would seem to be supported by the fact that before union has taken place the fragment connected with the head of the bone has a very imperfect supply of the veins or lymphatics, through whose agency the absorption would be likely to occur.

"In order to demonstrate the truth of Dr. Smith's proposition it would be necessary to present a series of preparations taken from patients who had survived intra-capsular fractures for variable but known periods antecedent to union, and to show that there was a progressive

shortening of the neck before the occurrence of union. Dr. Smith's sixth proposition seems to me to involve errors, or at least unsustained hypotheses, more glaring than that which is objected to in the fifth proposition. The language which is employed by Dr. Smith, in the sixth proposition, seems to convey the idea that the main obstacle to bony union, in intra-capsular fracture, is to be found in the condition of the fragment connected with the shaft of the bone; and that when the portion of the neck between the fracture and the shaft has been absorbed, the obstacle to bony union is thus removed. Now, I conceive the principal obstacles to bony union in intra-capsular fractures to be found in the condition of the fragment connected with the head, which, having no supply of blood-vessels, except those which are conveyed to it by the ligamentum teres, does not receive sufficient nourishment to secure its union by bone with the other fragment. The seventh proposition seems to be founded on the same errors or unsustained hypotheses which are contained in the fifth and sixth. The first sentence in this proposition requires to be qualified by confining the statement to intra-capsular fractures, as it has not been demonstrated that there is ordinarily any shortening of the cervix femoris following extra-capsular fractures. The eighth proposition is founded on the same error or unsustained hypothesis as the three preceding ones, viz., that the shortening of the neck by absorption precedes the union of the fragments by bony or fibrous tissue. From the similarity in the appearances of certain cases of fractured cervix in which union has taken place, and in which a large portion of the cervix has been absorbed, to certain cases of disease in which shortening has occurred without fracture, it might be inferred that probably the union of the fragments has preceded the absorption of the cervix.

"The principal interest which attaches to Dr. Smith's report appears to me to be the demonstration that there is a considerable diversity in the extent of the portion of the cervix femoris which is included within the capsule in different subjects; and that the portions included within the capsules are equal on the two sides of the same subject. He has also demonstrated that there is a considerable portion of the cervix intervening between the insertion of the capsule and the inter-trochanteric lines. From these facts which have thus been demonstrated, it may fairly be inferred that it will ordinarily be impossible to determine, during life, whether or not fracture is entirely within the capsule. And in old cases where absorption has taken place, and the capsule has shifted its position, it may be impossible, even by a post-mortem examination, to determine positively whether the fracture was originally within the capsule.

"I propose, therefore, to make a new classification of fractures of the cervix femoris, dividing them into two classes, viz., fractures between the caput femoris and the inter-trochanteric lines, and fractures at the inter-trochanteric lines extending more or less into the shaft of the bone. I propose to call the fractures of the first class *intra-cervical;* and those of the second class, *extra-cervical.* I think that these two classes of fractures will be found to correspond very nearly with those which have hitherto been described as intra-capsular and extra-capsular. They are somewhat distinct in the signs by which they are characterized during life, and are strikingly dissimilar in their appearances, as disclosed by examination after death. I submit the following propositions:—

"1st. Intra-cervical fractures are usually included within the capsular ligament, being near the head of the bone, and often involving a portion of it.

"2d. Intra-cervical fractures are attended with a shortening of the limb, which, in recent cases, rarely, if ever, exceeds an inch.

"3d. In intra-cervical fractures bony union very rarely occurs. When bony union fails, there is sometimes ligamentous union, and sometimes the fragments remain entirely detached from each other.

"4th. In intra-cervical fractures, whether bony union takes place or not, the cervix femoris becomes greatly shortened by interstitial absorption, and, after the lapse of several weeks or months, the limb may be shortened to the extent of two inches or more.

"5th. In intra-cervical fractures, as the neck of the bone is shortened by absorption, the capsule shifts its position, so that in some cases it ultimately becomes attached to the shaft of the bone.

"6th. In extra-cervical fractures, the cervix femoris is driven into the spongy structure at the junction of the trochanters with the shaft of the bone; and if the fracture be the result of a moderate amount of force, the upper fragment will be impacted into the lower. The shortening in such cases varies, according to Robert W. Smith, from a quarter of an inch to an inch and a half.

"7th. When an extra-cervical fracture is produced by a greater amount of force, the impaction is relieved by the splitting off of the trochanters, and the fragments acquire a considerable degree of mobility. In such cases, the shortening varies from one inch to two and a half inches.

"8th. In extra-cervical fractures, bony union may generally be expected, if the patient be not infirm, or of very advanced age. The union of the trochanters with the shaft of the bone takes place at an earlier period than the union of the neck with the shaft. An exuberant growth of bony matter is apt to take place at the junction of the trochanter with the shaft of the bone.

"9th. There is not usually any remarkable shortening of the cervix femoris after extra-cervical fractures."

The Society then, on motion, adjourned.

To be Continued.

Operations upon the Lips and Cheek.

By James E. Garretson, M.D.,
Of Philadelphia.

Diseases of the Mouth—*Continued.*

Hare-lip.—This defect consists in a break, single or double, in the continuity of the lip. The deficiency is almost precisely similar to that which exists naturally in the hare and rabbit, and from which, likewise, the imperfection gets its name. When congenital, it is always found associated with the superior lip.

A general view of the operation for the relief of hare-lip, and indeed the view which comprises or embraces the principles of the cure, is, that the cleft or break is to be pared, brought together, and held in apposition until nature shall secure a union. There are, however, nice surgico-mechanical associations, which are to be studied in connection with such principles of operation. Cutting manipulations upon the face, and especially about the lips, claim, it seems to me, more than ordinary skill and judgment. And such skill and judgment the surgeon should be prepared to give, if not for humanity's sake, at least for his own credit and reputation; for, as truly remarked by Mr. Skey, "on the more or less perfect result of such operations depends the appearance and expression of the patient for life." And surely as the surgeon shall beautify or mar, is the comfort of the patient, as well as his own reputation, influenced.

A proper and comprehensive study of hare-lip divides itself, naturally, into three subjects of special signification:—

1st. The time of life best suited to the operation.

2d. The condition of the patient.

3d. The mode of operating.

"I advise you," says Mr. Liston, "to defer the operation till the first set of teeth come in, and I have seen good reasons for adhering to such rule; when the operation is undertaken at an early period, there is often great difficulty—sometimes union does not take place, the parts turn out again, and the patient is rendered more deformed than in the first instance. When the features are enlarged somewhat, you have more ground to work upon, you can put the parts then neatly together, and you can almost answer positively for the union taking place. I operated," continues this gentleman, "on a child, the other day, in whom the operation had been performed twelve months ago. The parents were anxious to have it performed, but I then refused; it was done, however, but the moment the pins were removed, the lip turned out as before."

"For my own part," says Mr. Barnsby Cooper, "I entirely agree with Sir Astley Cooper, in regarding it as unsafe to operate on infants before weaning: firstly, because, from their excessive irritability, they are totally unable to sustain any loss of blood; and, secondly, because, after the operation, they are rendered incapable of sucking; and, indeed, Sir Astley has pointed out, in his lectures, the frequency of the failures he met with in his own practice, in operating upon infants shortly after birth. I consider the best time, under ordinary circumstances, to be soon after the child is weaned, as it is then capable of receiving nourishment independently of its mother, and has overcome the distress incidental to the separation from her."

Dr. Houston, of London, in examining the question as to the period of life best fitted for the performance of the operation, decides in favor of the third month after birth; urging, as his reasons, that the parts recover themselves better than when the operation is done later in life; that the lip, in due time, acquires fullness and pliancy; the nose is prevented from assuming a spread-out, ugly appearance; the fissure in the palate, if there be any, closes greatly with the growth, if supported by a firm and perfect lip; bad habits of speaking, such as guttural or nasal utterance, which, if once established, become irremediable, are avoided; and, by removing such disfiguration before the child is conscious of its existence, it is spared the feelings of humiliation which the consciousness of such infirmity necessarily imparts, and which invariably gives a tone to the character of the individual. He states that he has operated on several infants of three months old, with equal success in all cases, and has never failed.

Dupuytren recommends the third month. Velpeau the first six, but if that be already passed, he defers operating until the tenth or fifteenth year.

Skey, differing from Velpeau, says "the operation may be performed at almost any age, but should not be undertaken under about six months."

"The period of life," says Mr. Fergusson, "which I think very eligible for these operations, is, either before the teeth begin to show through the gums, or shortly after the child has ceased to suck, provided the health seems good. If the patient is allowed to grow up, he is usually unmanageable until after the age of puberty; but, if possible, the malformation should always be put right before this time, as there is a better

chance of the gum and nose assuming a good shape than after they have arrived at their full development. Indeed," continues Mr. Fergusson, "there are so many advantages besides these—as to speaking, appearance, etc.—that it is wonderful why any surgeon can recommend delay in such cases after the first or second year of life. I have myself," says Mr. Fergusson, "operated frequently within the first three months, and in some of these instances seen the child take the breast readily, with the pins still in the lip."

Dr. J. Mason Warren has operated on infants only a few days old, with perfect success. Prof. P. Dubois read before the Academy of Medicine of Paris a paper on this subject, and referred to seven instances which had come under his notice, where the proceedings had been resorted to, and successfully, within the first few days after birth; and Malgaigne has followed a similar practice.

"From all my experience and reflections, deduces Mr. Fergusson, "I am more than ever disposed to recommend a very early operation. Within the last twelve months I have operated on five infants, all of them under three months, with the most satisfactory results; and these cases, with others I have previously had, are sufficient to induce me to pursue a similar practice in all instances of the kind which may come under my notice, unless there be some apparent indication not to interfere. An erroneous impression, as I suppose, prevails that children are remarkably subject to convulsions while undergoing operations; and this is often urged as a reason for not interfering with hare-lip in early life. Doubtless convulsions have occurred in some of these cases, but similar effects have been produced in the adult, and by less formidable means, too. Sir Astley Cooper has referred to several examples of this kind, but I imagine they must be rare indeed. I once asked Dr. Abercrombie, of Edinburgh, the result of his experience on this point, and he could not bring a single instance to his recollection where convulsions could be fairly attributed to an operation."

What period, says Colles, the famous Dublin professor, should one undertake the operation for hare-lip? No doubt the earlier you perform it the better chance you will have of a speedy cure; but infants at a very early age do not bear operations well—many of them will be seized with convulsions, and die, if subjected to a more trifling operation than this we have been considering. I think between the second and third year the best period.

There are, says Professor Gross, in his System of Surgery, few subjects in surgery which have been more frequently discussed during the last quarter of a century than the question of the period at which the operation of hare-lip may be best performed. My own opinion long has been that the most eligible period is from the third to the sixth month, or a short time before the appearance of the first teeth; the operation is then usually borne well, there is no danger of convulsions; and the adhesive process generally proceeds most kindly. In very simple cases I do not hesitate to attempt it earlier, and on the other hand, in double or very complicated hare-lip, I almost always postpone it until the child has attained its second or third year.

Dr. D. H. Agnew operates at any period. Is only influenced, even during the process of dentition, by constitutional condition. If dentition is progressing quietly, that is, if there is no associated irritability, the doctor says he can see no reason why the operation may not be done just as well at this time as any other; has operated in all the stages of this process. Dr. A. prefers, however, early operations; thinks that his most successful cases have been on children who had not attained their tenth day. So far as interference with sucking is concerned, he remarks that he has seen a child take the breast almost immediately after an operation has been completed.

Prof. Pancoast entertains about the same views as expressed by Dr. Agnew. Dr. Pancoast gives it as the result of his very extended experience, that the operation may be about as well done one time as another. Does not see why the period of dentition is to be so cautiously avoided. Operates at any period of this process, if there are no contraindications in the way of constitutional disturbance. Has operated on many children as early as a few days after birth, with the happiest results. Does not find the operation interfere materially with nursing.

Prof. Henry H. Smith, of the University, says:—

"As respects the period for the operation, the earliest possible time after the tissues seem firm is to be selected, usually after the third month of infancy."

Now, although we have here embraced such a variety of opinions, which, to the inexperienced, may seem confusing enough, yet, when we consider the different circumstances under which these equally learned and experienced gentlemen have written and spoken, we are enabled to deduce from such experiences rules for guidance, in which, if my experience at all serves me, will be found data as reliable as we could well expect to possess. The views of such as I

have mentioned will be found to represent fairly the diversity of opinion existing throughout the profession generally. I especially selected these well-known authorities only because, being public teachers and writers, their views in extenso are thereby made the more easy to come at by any reader specially interested in this subject.

And first, in making up the sum of an operation we are to consider, regardless of the age of the patient, the amount of shock such operation is to give, and the ability of the patient to bear this shock. This at once brings up the character of the defect and the amount of operative proceeding necessary to its cure. A bad double cleft would inflict a much greater amount of pain than a simple single one, consequently would inflict a shock double or treble in force to the last. Now, every man, woman, and child in the world has just so much physique and no more. The experience and physiological knowledge of the surgeon enables him to weigh the life force. He must then decide, imprimis, whether or not his patient is equal in physical force to the demands of the operation.

He must consider the condition of his patient. This brings up the second of the special propositions or stand-points from which the operation is to be studied. The possession of a capable physique does not imply that the life force has not, like the tide, its ebb and flow. A child may have proper development, yet in the very hour in which it is presented for operation it may labor under temporary depression, the result of functional disturbances. A child, for example, just convalescent from cholera infantum, or just through with some of the exanthemata, would certainly not be as fit a subject for operation as though it had not suffered; it may have borne the demands made upon it very well, and come out of the ordeal looking strong; but then it is the last feather that bends the camel; the system that endured bravely the one demand may not have a balance of force on hand that will just at that time meet another. Give such a system time; get it back to the same condition in which the first demand found it, and you then have it certainly capable of the same resistance, and of the same endurance. Again, a patient may not be up to the required tone, and yet circumstances render a speedy operation desirable. We can assist nature. Exercise, fresh air, and proper food can do much. The last may imply that the milk of the mother, if the child be nursing, be exchanged for that of the hired nurse. Who has not examined the milk of a mother or wet-nurse, and found it greatly deficient in some important constituent? I have seen babes growing visibly weaker and more puny day by day; I have seen physicians baffled because they could find no one portion of the economy sicker than another. I have seen the microscopist take the milk on which such a babe has been feeding, and looking at it through his object glasses, found it half made up by cholesterin. A change of milk has effected immediate change in the child.

A child may have fibrinous blood to excess, and which tends to undue inflammatory action, or the lymph which such blood would exude might be so corpuscular in character that a wound would at once take on suppurative action. Either condition would be equally adverse to an operation. Yet we have antiphlogistics for the one and tonics for the other. A seemingly strong child may be in a typhoid state, and a blushing cheek may be but the effect of hectic or excitement; typhoid blood has, comparatively, no fibrin. If you were to do an operation on such a patient you would be sure to have a failure for your pains. I have at this very moment under my care a patient in just such a typhoid state, yet the pulse is bounding and the face is always flushed when I see him; the quick pulse is the result of the very deficiency in the blood, and the flush in his face comes, he tells me, always with my ring of his door bell, and goes with my going. A child may be cutting its teeth, yet this does not necessarily contraindicate an operation. It is not every child that gets convulsions and kindred troubles with the getting of its teeth; many a child goes through the whole process of dentition without cause upon which to ground a sob. If a child is brought to the surgeon, cutting teeth, with an operation for hare-lip to be performed, and there is associated with the dentition no general or special local disturbance, why should he not proceed, *cæteris paribus*, to at once do the operation? I can see, and I have up to this time met with no objections to so doing.

The next consideration is the operation itself. The modifications on the one principal operation, and the variety of cleft influencing such modifications.

A basis operation might best be represented by a simple V-cleft, having the very mesian line of the lip as its center — the indication being to restore such a lip to a normal contour. If we look

into our glass, we find that the normal lip has no break in its continuity; we find what may be termed the center of the lip represented at the free margin by a projection of more or less graceful curve. We find extending from this free margin up to the nares, and bounded laterally by the alæ nasæ a fossa—the fossa labialis. From this fossa we find the lip on either side spreading itself out to be lost in the cheek. To meet the indications of this case we must remove the break in the continuity, create a mesial projection, and give to the center a fossa. To fulfill such indications requires a study of the conditions from an artistico-surgical stand-point. We want, first, to remove the cleft. This in itself is easy of accomplishment; we have only to pare the edges and sew, or pin, the raw surfaces together. But in viewing this first step a little closer, we perceive that a common V-paring from the edges of the V-break would defeat our purpose in securing either a center fossa or a mesial projection; the mode of bringing the parts together would put on the stretch such fibers of the orbicularis as are associated with the margin of the lip, while all that portion farther up would be comparatively relaxed; thus our fossa would be a promontory, and our soft median swell would be a stretched mucous membrane. Such an operation would, then, in meeting the first indication, destroy our ability to fulfill the two others. We must, then, instead of the V cut seek a better; for in the way in which we pare our edges lies the fulfillment of all three of the indications. An ellipse suggests itself, and such a paring will meet our wants. 1st. It enables us to bring the edges of the cleft together. 2d. The center of the ellipse is its greatest diameter, and this center is the center of the lip. When we bring together this most widely separated part, it necessarily projects the most yielding surface—and such surface is the free symphysis of the lip; thus the second indication is met. 3d. The greatest stretch on the muscle is in the site of the myrtiform fossa, with a necessary relaxation above and below; and thus the last indication is met; for, as the result of such a condition of the parts, we have a fossa formed and a promontory at the free mesial line.

Remarks. — The paring of a cleft should always be constant in the one feature of being V shaped, as reference is had to the base of the V looking toward the throat; this allows for the excess in the retraction of the skin over the mucous membrane. If this precaution is neglected a difficulty is likely to be experienced in the gaping of the cutaneous portion of the wound.

The subject of retaining the parts in apposition as regard is had to suture material, has elicited much controversy. The ordinary operation is as follows: After you have pared the edges of the cleft, take up a needle threaded with the ordinary waxed silk, pass this through the free margins of the lip and bring the parts together—this is to insure a satisfactory approximation at this point. Next take two ordinary steel pins and pass them at equidistant points on the lip—they must go in depth at least half its thickness; these pins are to enter and emerge at least five lines on either side of the fissure. Silk ligature stuff in the shape of the figure of 8 is now to be passed about and around these pins. Adhesive strips are next passed over the pins, a slit being made for their accommodation, from cheek to cheek; the object of these strips is to press tissue toward the wound, in this way preventing tension. If blood oozes out and clots upon the ligatures, it has been considered rather favorable than otherwise, as it has been thought to add to the support of the parts. After two or three days the pins are carefully removed by a rotatory motion; the ligature material and adhesive strips are allowed to remain from four days to a week longer.

The ordinary hare-lip pin is objectionable; it is too large. The figure of 8 ligature in connection with the pin is equally to be condemned. Wherever we see a case of hare-lip that has been operated on, we see four ugly scars on either side of the cleft: these are the points at which the pins entered and emerged, and upon which the figure of 8 ligature made its greatest compression; the parts ulcerated, and the scars are simply the cicatrices from the healing of such ulcers.

Various means have been suggested to be employed in lieu of such a dressing. Dr. Agnew, in a conversation I had with him lately on the subject, tells me he now uses silver wire altogether. He simply sews the parts together with a greater or less number of interrupted sutures. He thinks such sutures possess great advantages over the pins.

Another means of bringing the parts together that has been suggested, is the employment of the interrupted suture of silk from the under surface of the lip. In one case where I tried this method the result was very unsatisfactory.

Dr. Washington Atlee has suggested a suture

which differs only from the ordinary pin and figure of 8 in that he employs rings of india-rubber, which are stretched over the pins. This suture for many purposes must prove an admirable addition to the armamentarium chirurgicum, but in hare-lip operations it has no advantage that I can see over the ordinary figure of 8, inasmuch as the same strain, if not a greater, is exerted over the surface at which the rubber is supported by the pins. The merit claimed for this suture is, that whether a part swells or remains normal, the compressing force continues about the same.

A mode of securing the apposition of the parts, which I think will be found very satisfactory, is to take three, four, or more pieces of silver wire, the fewer you can get along with the better, the gauge being the most delicate that can be procured; pass these and let them emerge at lines which shall very nearly correspond with the commissure of the lips. Next take a strip of common sheet-lead, and, cutting it to an appropriate size, make in it as many little holes as you have threads of silk to either side; pass the threads through these holes and compress on each a McLean button—*i.e.* a simple flat shot. Now, with the fingers, nicely approximate the wound. This satisfactorily accomplished, draw up the wires and fix them on a second piece of sheet-lead, as in the first instance. If the center, which is the point of the wound, tends to bulge forward, a delicate compress is to be placed over it and bound to its place by a vertico-labial sling. The advantages of this dressing are, that it may be retained weeks, if necessary. It is entirely unirritating. The wound is perfectly open to examination, and, more than all this, the threads being unirritating and so very slight, when taken away leave no scars.

A still happier dressing, but one which can only be applied on such patients as have reached the age of intelligence, is a modification of Dewar. Dewar's compressor may be likened to the ordinary double hernia truss. It consists simply of a spring which passes around the head, having small pads at either extremity. The piece is of such circle and character as to bring the pads to the labial commissures. The instrument is held in position by any convenient means. Dewar holds it by what might be termed a fronto-sagito-lambdoidal sling. The process of dressing with this instrument would be as follows: After making the paring of the cleft, cleanse the parts well with cold water, (controlling hemorrhage by pressure on the facial arteries;) next take a strand of the common silk ligature material and nicely approximate the free edges of the lip, passing the needle on the under side. The next step is the application of the compressor. With the thumb and finger force the tissue of the cheeks toward the mesial line of the lip—this approximates perfectly the edges of the wound; replace your fingers by the compressor, and the parts are held *in situ*. If the approximation of the wound thus made should not, however, be satisfactory, certain little secondary compresses of linen may be placed more immediately about the wound and fixed by a delicate roller. The advantages of this dressing will be at once apparent. There are no pins or ligatures used, consequently there is nothing to interfere with very direct union; there are no punctures made in the skin; of course there is no risk of having any but the single linear scar, and even this, if direct union is secured, must be very slight indeed. The parts can be examined at any and all times without any important interference with the apparatus.

In some individuals the coronary arteries are quite large. To suppress the hemorrhage from these arteries dependence is generally placed on the pressure exerted in bringing together the edges of the wound. If such pressure does not answer, or if you should prefer some dressing that will not make this pressure, light ligatures may be thrown around the vessels, one end to be cut off, the other to be brought out on the back part of the wound. Ligatures, however, are to be avoided when possible, as they interfere with proper union.

A much better means than the resort to the ligature is compression of the facial arteries. Such compression needs to be kept up but for a short time, as the smaller artery soon contracts. Dewar's compressor controls the hemorrhage by its pressure on the coronary arteries, and such compression may be very readily imitated with the common compress and roller.

There is a feature associated most importantly with the formation of the linear cicatrix, and the unsightly notch which so commonly deforms hare-lip patients, that I do not remember to have ever seen alluded to, but which is of such consequence as to merit the closest scrutiny. Is it the fault of nature or the fault of the surgeon that the operation gives any cicatrix at all? Cicatricial

tissue—tissue inodulaire, as Delpech more happily terms it—means accidental tissue—new tissue formed from granulations. The existence of inodular tissues implies, as it is more or less in amount, that a wound has healed either by primary or secondary adhesion, and certainly not by what Mr. Hunter terms union by first intention, or Mr. Paget calls immediate union. If a wound is made to unite by first intention, there cannot possibly be any inodular tissue or scar, because no new tissue has been formed, blood-vessels and nerves have been brought into perfect contact, and the harmony of the parts has been so completely restored that after a few weeks the closest observation fails to discover the seat of accident. We have familiar examples of such union in the slight cuts we are constantly giving ourselves with the razor, the cuts we get about the fingers, etc. Some three months back I removed from the parotid region of a young man a tumor quite the size of a hen's egg. The flaps were adjusted with the greatest care and held in place by compresses of old and fine linen. I saw this gentleman about two weeks since, and so immediate had been the union that it was impossible to say where the cut had been made. Mr. Paget mentions very large wounds that not unfrequently heal in this perfect manner. One case, that of a lady who had been operated on for scirrhus of the mammary gland, might be specially alluded to. Speaking of the operation, he says:—

"The flaps, which were very large, had been carefully laid down, strapped with isinglass plaster, and well tended. After death, which occurred in three weeks, from erysipelas and phlebitis, I cut off the edges of the wound with the subjacent parts, expecting to find the evidences of union by organized lymph or, possibly, blood, but neither existed; and the state of the parts cannot be better described than by saying that scarcely the least indication remained of either the place where the flap of skin was laid on the fascia, or the means by which they were united. It was not possible to distinguish the relation which these parts held to each other from that which naturally exists between subcutaneous fat and the fat beneath it. There was no unnatural adhesion; but the subcutaneous fat which did lie over the mammary gland was now connected with the fascia over the pectoral muscle. The parts were altered in their relations, but not in their structure. I could find," continues Mr. Paget, "small points of induration where, I suspect, ligatures had been tied, or where possibly some slight inflammation had been otherwise excited; and one small abscess existed under the lower flap. But with the most careful microscopic examination, I could discover no lymph or exudation corpuscles, and only a small quantity of what looked like the debris of such oil particles or corpuscles of blood as might have been between the cut surfaces when the flaps were laid down. In short," says Mr. Paget, "this was union by first intention; it was immediate, at once in respect of the absence of any intermediate substance placed between the wounded surfaces, and in respect of the speed with which it was accomplished."

The union of a wound by adhesion, or by granulation, implies a certain amount of inflammatory action, and the exudation of, and organization of, lymph. This is the way in which hare-lip wounds are healed, and this is why we have the linear cicatrix; and not only the cicatrix, but, according as the union has simulated or departed from the immediate type, have we a great or small notch.

But how is the notch formed? The explanation is simple enough; but it is not the explanation generally given; at least, I think not. The notch is the result of the natural contraction which belongs to fibrous tissue, of which fibrous tissue the cicatrix is formed; and if we observe, we will find that where this linear inodular tissue abounds in excess, there we will always find associated a big notch. If we need further proof to convince ourselves that such contraction is the cause of the notch, we have only to remark that in cases of large cicatrices there has occurred invariably the destruction of the symmetry of all the surrounding parts; the contraction has puckered, as it were, the whole lip. When the linear cicatrix is very limited, the notch is correspondingly small, and these conditions could not so uniformly exist associated, if it was the manner of the paring exclusively that gave the notch, and not the contraction as I have described.

The nearer then the approach to a union by first intention we can make in hare-lip, the better for our success will be the result. But can we not get immediate union in full? This would imply that we have artery to artery, vein to vein, nerve to nerve. Well, the artery is a prominent point of reference, and the relations of surrounding parts are in perfect unison. If we can get the mouths of the two arteries together, will not all other vessels assume, by compulsion, inoculation? We may try for this at any rate; such care will necessarily insure to us the very nicest approximation of parts, and if immediate union cannot

be gotten, we may at least secure to our patient by such care the smallest possible scar.

To return now to the modifications in hare-lip, and the operations.

The first modification on the simple cleft described is where the break is to the one side or the other, being bounded in either instance by the mesial line. This character of cleft, particularly as the left side is concerned, is by far the most common type; indeed, it may be denominated the type proper of hare-lip. In operating here, it is readily seen that the simple ellipse, as practiced in the previous case, will not answer. Such a cut would give the labial swell and fossa to the one or the other side of the mesian line, according as the break extended right or left.

In these cases the indications are met by the operations of Malgaigne. This surgeon makes the one side of a simple V-cut on the external flap, while he practices the semiellipse on the mesial flap. This, it is seen, brings up the outside flap, and projects the apex of the mesial one. A modification on this operation, and a decided improvement, I think, is one suggested by Dr. Richard Levis. This consists in making a kind of double V-cut on the mesial flap. The knife is entered just below the nostril, and the first incision takes the line of the one side of the V. On nearing the free surface, however, this direction is changed, and a second V is cut out of the substance of the flap. This mode of operating secures a very nice labial swell, and will be found sufficiently easy of performance. To bring out to the level the notch thus made, implies some force; and if it should be designed to use Dewar's compressor, it must always be associated with a point of silver suture; the suture being introduced from the mucous surface.

Another, and the next most common variety in hare-lip, is that in which the break is double—that is, the single break is divided into two parts by a teat which starts out from the apex of the cleft; this teat is seldom more than half the width of the lip. For the correction of this defect, various means are resorted to. Some surgeons cut out the teat, thus converting the double into a single break, making the basis cleft as described. Others, on the contrary, after paring all the four sides, tease and strain the center piece or teat until they get it on a level with the rest of the lip. Both of these operations are very objectionable. The first takes away an unnecessary amount of substance from the lip, thus giving a tense, stretched appearance to the part; while the natural resiliency which belongs to most tissue insures, from the second manipulation, a character of notch or central depression almost as unsightly as the original deformity. In this simple form of double hare-lip, I think it will be found the most satisfactory operation to pare the lateral flaps in the elliptical form as described, while the center teat should be pared into the V-form, the base being to the septum narium. All the parts will thus be found capable of a neat approximation; the teat doing its share more or less in filling up the break. The approximation is to be made as in the mode described.

A second form of double hare-lip is that in which the alveolar process is associated with the teat. This is termed complicated hare-lip. The portion of process projecting into the cleft is generally an intermaxillary formation, and holds the germs or developed incisor teeth—generally the centrals alone. The correction of this defect implies a somewhat formidable operation. The first step consists in separating well the lip from its reflection over the process. Next the gum is separated thoroughly from the projecting bone, which bone, the third step in the operation removes down to the natural curvature of the parts, either by means of saw, chisel, or cutting forceps. For myself, I prefer the chisel; it is certainly a much more convenient instrument than the Hay's saw so commonly employed. A straight and curved chisel should always be at hand. If in this third step of the operation the anterior palatine artery is wounded, the resulting hemorrhage is easily controlled, either by taking up the vessel, by touching it with one of the Monsel's solutions of iron; or, if neither of these means suffice for its accomplishment, the artery may be touched with a red-hot cauterant needle, or it may be plugged with a point of pine stick. The bone removed, the flaps of gum may be laid back in the cavity, where they will remain sufficiently approximated without the employment of any sutures. The operation upon the lip may now be done at once in the manner described; or, if the force of the patient is too much exhausted, it may be left for a future period.

These are the two principal forms of double hare-lip. An appreciation of the operations required for their cure will enable the surgeon to meet satisfactorily any modifications that may present on either of them; and these modifications, it is to be suggested, are constantly occur-

ring. Let us for a single moment refer to an uncomplicated double hare-lip, where the center piece or teat, as I have called it, might be found so large and square as fairly to divide the lip into three parts. Now, here the mesian line of the lip would be formed by the center piece; it would, therefore, I think, suggest itself to any one that either side of the cleft was to be treated as a separate hare-lip—that is, the whole manipulation might be done at the one sitting; but there would have to be symmetrical parings made of either cleft. In such a case, we have also to take into the account the concavity made on either of the sides of our fissure, as reference is had to the influence exerted on the free margin of the lip; for here, of course, we require no swell. Whether, again, in these really double cases, we would first operate on the one side, and when this was cured, on the other, is such a matter as should properly be left to the judgment of the operator. Many surgeons prefer to correct the whole deformity at once. If we should do this, the operation would only deviate from the principles laid down, as regard would be had to approximating the parts. If the center piece might be small, I think it would be found the most satisfactory practice to pass the pins, wire, or whatever suture material might be used, directly from one lateral flap, on through the center piece, to and through the other, thus uniting all the parts together by a common suture. If, on the contrary, a center piece is broad and well covered by skin, I think that the greatest good would be found to be secured by using two sets of ligatures. As regards the single or double operation, I myself should be influenced by the width of the middle piece, the tenseness or laxity of the tissue of the lip, and the endurance and condition of the patient.

Another modification of the double hare-lip is one in which there is a projection into the cleft of the incisor teeth, the alveolar process itself being sufficiently normal to allow of non-interference with it. This modification is met with commonly alone in the adult, or at least after second dentition. The projection of the teeth is the natural result of the lack of external support from the labial deficiency; the tongue has actually pushed them outwardly. This explanation will, I am sure, only seem strange to such as are unacquainted with the exceeding mobility of the dental organs under slight but continued force. It is certainly the true cause of such projection. In a case of this kind, a preliminary operation is the removal of the teeth. If, now, six months are allowed to intervene before attempting the operation on the lip, the alveoli of the extracted teeth will be found to have receded, through absorption, quite the eighth of an inch. The second operation is then to be done *secundem artem*. This waiting on the process of absorption will be found greatly to conduce to a successful result.

A still better though more tedious mode of correcting such a deformity is by first bringing the projecting teeth back to their normal place in the arch, through the agency of elastic ligatures. This is a perfectly feasible operation, and not at all difficult of performance. By such a preliminary procedure we not only get the teeth out of the way, but we save to the patient these valuable organs. To make and apply such a ligature, we have only to take a slip of common India-rubber and attach at its either end loops of silk. We next take these loops and place them over certain of the molar teeth; it is entirely immaterial which. The center or rubber part is next stretched forward and laid over the labial faces of the teeth to be pulled back. It is astonishing how quickly and powerfully such a force will act upon the teeth. In two or three weeks, at most, the teeth may be brought into their proper line. To secure them in situ, and prevent their being again pushed forward, we have only to keep them ligatured in any convenient manner until the operation on the lip is made.

Cleft of the lip, as previously remarked, is common to almost every case of cleft of the hard palate. It has always been deemed very important, in these cases, that an operation on the lip should be done as early as possible; it was and is thought to favor the union of the bony cleft. In these cases the operation differs from that suited to any ordinary case only when there is projection of one or both alveolar prominences into the break. In these cases, if the projection is very marked—that is, so much so as to prevent the bringing together of the lips over them—we may, perhaps, be able to do nothing better than cut the parts away. This, however, is always to be avoided where possible—firstly, because we thus destroy the germs of the teeth; and secondly, because, if by any means we can get union of the lip, the parts in their development will come mutually to accommodate each other. In such cases it is recommended, by some authors, that

we endeavor to bend back these juttings of bone, turning them in toward the mesial line. Where this can be done, it answers a very admirable purpose. Still another mode—after the method which I suggested for the complete relief of this character of cleft—is found in the employment of the fronto-occipito labialis elastic sling. This sling is so applied that it pulls upon the projecting process backward from the occiput. It will certainly fulfill the indications, but its employment is not unattended with trouble.

Cases of double hare-lip not unfrequently occur where the center slip is so associated with the septum of the nares as to make the parts seem as one. If there was not the loss of material from the lip, the septum would bear being described as in a state of hypertrophy. Again, the lost part from the lip is sometimes found attached to the very tip of the nose, giving to the patient the appearance of laboring under lipoma. These, together with all the anomalies in this direction, are first to be studied, as regards their cure, from the artistic stand-point. The surgeon knows where and what he can afford to cut—he knows what nature will do in the case; it remains, therefore, as is plainly seen, for him only to consider well his incisions—where he shall make them, and what is to be the result—before the operation is attempted. *Chirurgus viribus suis fietus est.*

A useful study is found in the examination of examples. If we familiarize ourselves with all kinds of cases, and if, what is still better, we represent the morbid anatomy in India-rubber, and thus devise and try experimental operations, we shall, I am sure, find the subject of hare-lip grow simple enough.

Excellent studies will be found pictured on the following pages: Liston & Mütter's Surgery, page 187; Erichsen's Surgery, page 690; Gross's Surgery, pages 611, 612, 617, vol. ii.; Fergusson's Surgery, page 494; Smith's Surgery, page 163.

Addenda.—In operating for hare-lip, always first dissect the lip well off from its attachment to the gum.

In paring the fissures, the young surgeon is much more apt to remove too little than too much.

In paring out the apex of the cleft, be sure and freshen perfectly the extreme point of such apex. This is oftentimes neglected, and an ugly pucker is the result.

The paring for hare-lip is, perhaps, best made on a wooden spatula.

Few instruments are really required in this operation. A scalpel and forceps, together with such ligature material as it is designed to employ, will answer the purpose well enough.

The best mode of operating on the infant is for the surgeon to seat himself face to face with an assistant. The child being etherized, the surgeon lays its body over his own knees, the head being supported by the assistant. Upon the incision being made on one side, the assistant grasps the lip between the thumb and finger, compressing the coronary artery. When the artery of the opposite side is cut, he secures this. Both are steadily held until the operator is ready to coaptate the wound.

In operating on the adult, I think it will be found the most convenient plan to stand behind the patient; such a chair being used, and the head being placed in such position, as recommended in the operation of staphyloraphy.

Another very convenient manner is to sit in front of the patient, the head being supported by the breast of an assistant.

When plaster is used to assist the ligatures, silk gauze and collodion are to be preferred; this leaves the wound constantly exposed to inspection, and is a light and most effective dressing.

To be continued.

Medical Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Reported by William B. Atkinson, M.D., Recording Secretary.

November 13th, 1861.

VARIOLA, ITS MODIFICATIONS AND TREATMENT.

Dr. Condie did not rise for the purpose of controverting any of the statements made by the lecturer of the evening in reference to the varieties and treatment of small-pox. It was difficult indeed to offer any comment upon the instructive outline which had been laid before us, as it failed to present us with any salient points for either a favorable or unfavorable criticism. While he admitted the entire correspondence of the remarks of Dr. Bell with the results of his own clinical observations, Dr. Condie believed that it would be scarcely necessary to attempt, from the materials thence derived, a more full development of either of the points hastily glanced at by the lecturer.

In respect to the different forms or varieties of variola, Dr. Condie was convinced that they had been multiplied by writers on the disease to an

unnecessary extent. In a practical point of view, little was to be gained by any other distinction than that which was based upon the extent and discreteness of the eruption—the absence or presence of petechiæ, or other serious affection of the skin, the character of the fever, and the dynamic condition of the general organism by which the disease is accompanied.

In respect to treatment, notwithstanding much good may be effected by appropriate medication commenced at the very onset of the disease, and in anticipation of the eruption, yet it must be borne in mind that every attempt directed to procure an abortion of small-pox, to arrest it in any of its stages, will fail. The adoption of proper therapeutic measures previously to the appearance of the eruption may have the effect of reducing the violence and diminishing the danger of the attack, but can neither prevent it from occurring nor from running its specific course.

For small-pox there is no specific treatment. Every case of the disease, as it occurs, must be treated upon general principles, according to the indications presented. Mild cases, occurring in patients who are temperate in their habits and of a good constitution, a purely expectant treatment is all that is in general demanded. In more violent cases, and in those which happen in patients of bad habits and impaired constitutions, the utmost watchfulness, with a prompt and decided course of treatment, will be demanded, and will often be crowned with success.

There is, perhaps, no disease in the treatment of which greater attention is required in respect to the regimen of the patient. Without pure, fresh air, a proper temperature, the strictest cleanliness, with a suitable diet and appropriate drinks, all other remedial measures, however well adapted to the case and judiciously and faithfully administered, will fail to exhibit any curative efficacy.

Since the time of Sydenham, what has been termed the cooling treatment has been very generally recognized as the one best adapted to small-pox. Dr. Condie, however, feared that the "cooling treatment" has in some instances been carried too far, and, in consequence, has been productive of harm rather than benefit. Attendant upon many cases of the disease there is a manifest tendency to a sinking of the vital powers of the patient, which tendency cannot fail to be increased by such a cooling regimen as Dr. Condie had seen put in practice during the present epidemic—the patient being kept in a cold room, with a draught of air upon him, from open windows, night and day, and allowed to partake freely of iced water or lemonade. Some even carry "the cold regime" so far as to subject the surface of the patient's body to sponging with cold water. If there be any tendency present to adynamia, such a treatment must necessarily tend to confirm it. Dr. Condie would not be understood, however, as countenancing a heating treatment in the cases of small-pox as they ordinarily occur. While he deprecated an excessive cooling regimen, he would at the same time insist that there occur but few cases of the disease in which a well-ventilated apartment of moderate temperature, but free from draughts, is not essential to the safety and comfort of the patient; and equally as few in which he should not be allowed the free use of any simple cool fluid as a drink.

In respect to the propriety of depletion or of stimulation in the management of small-pox, this must be decided by the circumstances of each separate case—the general character of the prevailing epidemic being always, however, taken into consideration. In very few cases during the present prevalence of small-pox had Dr. Condie found it necessary to resort to an active antiphlogistic treatment. In the majority of cases which fell under his care, the treatment pursued was such as would be demanded in the ordinary form of typhoid fever. In general, a tonic and moderately stimulating treatment was indicated throughout the attack. In the more severe cases, diffusible stimulants were demanded to sustain the patient while the disease ran its course, and until the revival of appetite and a renewal of the powers of the stomach furnished the opportunity for a resort to tonics and a nourishing diet, by which alone we can reasonably hope to restore permanent strength to the patient.

In very nearly all the more severe cases, accompanied by a profuse eruption, Dr. Condie had found that, during the stage of maturation, a full nourishing diet, whenever it could be taken, with a liberal use of alcoholic stimulants, was essential to sustain the vital forces. Rich broths, oysters, stewed or broiled chicken, tenderloin steak, and such like articles he has known to be taken and relished, and believes that he has just cause for ascribing to their use the preservation of his patients' lives in numerous instances.

In regard to external remedies—cups, leeches, blisters, rubefacients, etc. do not enter into the materia medica of small-pox; warm bathing, fomentations, and perhaps certain unguents may often be found decidedly beneficial. With Dr. Bell, Dr. Condie believed that the warm bath was adapted, as a remedial agent of some considerable efficacy, to a much more extended application in the treatment of small-pox than had been generally made of it, in this country at least.

There is little doubt that deformity from pitting in cases of small-pox may very generally be prevented by the abortive action of tincture of iodine directly to the postules. Much may also be done, in this respect, by keeping the face constantly covered by a thick layer of perfectly fresh lard, or indeed any mild, unirritating unguent. If these unctions be confined to the face, Dr. Condie could not see any very strong objection to their use; but it should be kept in mind that, if they be applied to too large a portion of the body, they will most certainly concur with the eruption in arresting the important functions, and in this manner augment the tendency already induced by the disease to a depression of the vital powers.

Two interesting points in connection with the subject of small-pox had not been touched upon by Dr. Bell; upon each of these Dr. Condie proposed to make a few brief remarks.

One of the points referred to relates to the all-important question, why is it that, while in so large a proportion of cases vaccination affords to its subject entire and permanent immunity from the contagion of small-pox, in others, who were reputed to have been placed fully under its protection, no such immunity is observed?

In a very large number of cases, Dr. Condie remarked, the failure of the prophylactic power of vaccination can be traced to the very careless manner in which it is performed in too many instances by the physicians themselves, or to the occurrence of some accidental cause by which the regular progress of the vaccine vesicle is interfered with, and its power to infect the system of the patient impaired. In such cases the patients have in fact never been vaccinated, and it is not at all surprising that they should contract small-pox when exposed to its contagion. Besides, however, these instances of entire or partial failure in vaccination, many others occur, especially during the prevalence of variolous epidemics, in which individuals are attacked with small-pox who had been vaccinated with genuine and efficient virus, and in whom the disease, at the place of its insertion, had apparently run regularly through its several stages, exhibiting all its proper pathognomonic characters, and leaving upon the arm, after the detachment of the scab, a well-defined, characteristic cicatrix. In these cases the attack of small-pox will often exhibit not the slightest modification in its characters, duration, or violence, from what it does when the disease occurs in such as have never been subjected to vaccination. By a careful examination of the results of the revaccinations that have been practiced, year after year, in the armies of Prussia, Bavaria, and other European powers, compared with those instituted among the pupils of our public schools, by a committee of the College of Physicians of this city, of which Dr. Condie was a member, he had convinced himself that the instances last referred to, of the failure of vaccination as a permanent protective against the contagion of small-pox, are due to an idiosyncrasy of constitution possessed by certain individuals—an idiosyncrasy which prevents the vaccine infection from bringing about that constitutional change, in whatever it may consist, by which the system is protected, subsequently, and for the remainder of his or her life, from the action of the variolous contagion. In some of those in whom the existence of the idiosyncrasy is manifested, no prophylactic influence whatever is evinced by what may with propriety be termed a successful vaccination; in others, the prophylaxis is only partial or of temporary continuance, so that, either immediately, or in the course of several months, or even years, the patient becomes again, to a greater or less extent, liable to an attack of small-pox when exposed to its contagion.

When the record of the numerous revaccinations that have heretofore been performed is carefully analyzed, it will be found, Dr. Condie was convinced, that the idiosyncrasy alluded to is enjoyed by about thirty-three per cent. of all who have been vaccinated. So strongly pronounced is this idiosyncrasy in some subjects, that, after repeated revaccinations, the susceptibility to small-pox infection will remain undiminished, or, at the furthest, only slightly impaired.

Admitting the fact here stated, and Dr. Condie did not perceive how it could be controverted, we argue the vast importance of the revaccination of entire families, neighborhoods, and communities, in every instance when small-pox breaks out in their midst—not simply for the purpose of testing the genuineness of the preceding vaccination, but to overcome, if it be possible, by repeated efforts, the resistance which certain constitutions present to the full prophylactic influence of the vaccine infection. It would be well, Dr. Condie remarked, if some pains were taken to impress upon the public mind the foregoing facts. Were they generally realized, the confidence of the community in vaccination would be increased by being assured that, in the trifling and perfectly safe operation of revaccination, performed before actual infection, they have at command an almost infallible security against an attack of small-pox, however much they may be brought in contact with its contagion.

As another interesting point connected with the history of small-pox, Dr. Condie instanced the influence exercised upon the child in utero by the disease when it attacks the mother during pregnancy. Does the gestation continue to the full period? Is the child equally subjected to the disease with the mother? These questions have been answered differently by different authorities, each confessedly basing his conclusion upon the result of his own observations. An attack of small-pox, like that of any other severe disease in the pregnant female, will no doubt often produce abortion, but not necessarily or invariably. In no instance observed by Dr. Condie, during the present epidemic, in which small-pox occurred during gestation, was the period of the latter in the slightest degree interfered with.

By some of the European writers it has been asserted that the infection of small-pox is never transmitted from the mother to the infant, excepting by its being brought directly into contact with the variolous contagion while it is passing into the world or immediately afterward.

During the present epidemic Dr. Condie had witnessed five cases in which small-pox attacked during pregnancy. In all of these cases delivery at the regular period took place during the stage of maturation. In one case the infant was born free from disease, and being immediately removed to a healthy house and neighborhood, escaped infection. When Dr. Condie last saw it, it was two months old, and perfectly healthy. In all the other children the variolous eruption made its appearance within from one to five days after

birth. They all terminated fatally—one on the third, two on the fifth, one on the sixth day of the eruption. It is evident, from these four cases, that the disease must have been acquired by the children in utero, though at different periods subsequent to that at which it was contracted by the mother.

Dr. Condie remarked, in conclusion, that his experience did not coincide with that of Dr. Coates in respect to the areola formed on the arm of the vaccinated. He had never had cause to be satisfied with the genuineness of the vaccination when the areola on the arm was irregular in shape, or presented a ragged edge. He was convinced that the more nearly the areola approached in all respects to the delineation of it originally furnished by Jenner, the more certain could we be of the genuineness and efficiency of the vaccination.

Dr. Jewell remarked that some years ago he attended a woman with small-pox who was in the eighth month of her pregnancy. On the eighth day of the eruption, the secondary fever assuming a violent character, premature labor came on, and she was delivered of a living child covered with small-pox pustules approaching their completion. In this case the mother perished, but her infected offspring survived.

While on the floor he would take the opportunity of saying a few words upon two points bearing upon the subject before the Society, to which neither the lecturer nor those who had followed him had made any allusion. He referred to the protracted character and the location of the epidemic small-pox now prevailing in our city.

He felt disappointed, and he was sure there were others like himself who had come here to learn something concerning the character and treatment of the present epidemic. The well-known ability of the lecturer for careful observation, and his enlarged experience in the disease during a former as well as in the present epidemic, from his opportunities as physician to the small-pox hospital, led him to indulge in this belief.

Dr. Jewell attributed the prevalence and propagation and long continuance of this loathsome disease in our city in a great degree to the neglect of public vaccination. It was well understood that for several years previous to July, 1860, (a few months only anterior to the appearance of the epidemic,) public vaccination was almost entirely neglected, and hence thousands in our city were ready subjects for the disease. The new ordinance for public vaccination, under direction of the Board of Health, went into operation in July, 1860, yet notwithstanding there has been a vigilant administration of the system, (over 10,000 cases having been returned as successfully vaccinated within a year,) it has failed to secure the object contemplated. It is a fact, not only well known, but greatly lamented, that very many in our community refuse, either through indifference or prejudice, to have their children vaccinated. Some more stringent legal enactment of the legislature, requiring every child born or brought into the city to be vaccinated, with the imposition of a penalty for neglecting or refusing, must be procured before this inestimable prophylactic will become a complete security against the prevalence of small-pox as an epidemic.

He was of opinion, also, that the unwillingness of many physicians to comply with the health law, requiring them to report all cases of pestilential or contagious disease coming under their notice to the Board of Health, was among the existing causes for the long continuance and spread of the disease. If all cases, with their location as they occurred, had been reported to the Board of Health, he had no doubt that the disease could have been mitigated and perhaps arrested through the sanitary measures that would have been instituted in those neighborhoods where there was an accumulation of existing causes for the nourishment and spread of the epidemic.

Another point to which he would call the attention of the Society was the location of the disease, or, in other words, those localities of our city where it had prevailed to the most alarming extent, and where it had not only made its appearance at the onset of the epidemic, but where it had in a very large degree confined its ravages.

The mortality from small-pox, in 1860, was only 57. Of this number 43 occurred in the three last months, to wit: 11 in October, 13 in November, and 19 in December. From this period we date the commencement of the epidemic. Sixteen of these deaths were in the 17th Ward, while five were in the 1st, and six in the 4th Ward.

The whole number of deaths from small-pox during the nine months of the present year, from January to September inclusive, have been 641. Of these 474, or 73 per cent., occurred in those sections of the city where the population and tenement houses are crowded; where there are numerous courts and confined alleys, harboring wretched and depraved occupants, and where there exists to a considerable extent bad ventilation and a great demand for sanitary improvements. One of these sections embraces the first five wards, bordering upon the Delaware, including old Southwark and Moyamensing. Here there were 221 of the above deaths, or 34·47 per cent. of the whole; while the other section, including the 16th, 17th, 18th, 19th, and 20th Wards, furnished 253, or 39·46 per cent. of the deaths. On the other hand, in the ten wards intervening between the 5th and 16th, embracing a populous portion of our city, yet better ventilated, better accommodations for room, and containing a better class of inhabitants—with numerous sanitary advantages—there were only 88 deaths, or 14 per cent.

Thus we have ten wards, above enumerated, in the very center of the city, containing a population of 223,745, returning only 14 per cent. of

the deaths from small-pox; while the other ten wards, five south and five north of and adjoining this central district, with a population of no more than 261,955, furnished 73 per cent. of the mortality.

The only and perhaps true inference to be drawn from these mortuary statistics of small-pox is, that the epidemic has spent its force and chosen its victims from those wards of our city where the laboring classes of the population are crowded together; where narrow streets and blind courts with closely-built and unventilated houses abound; where dampness and filth in-doors, and badly-drained and muddy streets prevail; and where a sad want of sanitary conveniences renders the neighborhoods prejudicial to health, and becoming active causes for the prevalence of disease.

Dr. Jewell was of the opinion that the small-pox, which had now been prevailing over a year in the city, was on the decline.

To be continued.

EDITORIAL DEPARTMENT.

REVIEWS AND BOOK NOTICES.

Commentaries on the Surgery of War in Portugal, Spain, France, and the Netherlands, from the battle of Roliça, in 1808, *to that of Waterloo, in* 1815; *with additions relating to those in the Crimea, in* 1854–1855. Showing the improvements made during and since that period in the great art and science of surgery on all the subjects to which they relate. Revised to October, 1855. By G. J. Guthrie, F.R.S. Sixth edition. Philadelphia: J. B. Lippincott & Co., 1862.

The name of the author of this work is more widely known in connection with the literature of military surgery than that of any other individual. His recorded observations, dating from 1808 to 1855, and his lectures during thirty years as Military Professor, entitle him to high consideration as an authority. The passage of the work rapidly through to a sixth edition is also evidence of the high appreciation of his teachings.

This reprint appears opportunely, and will be eagerly sought for by medical men who are now in the field giving their services for the relief of the sick and wounded in the struggle for the preservation of our nationality. To them its practical instruction should be considered indispensable. The most of our volunteer surgeons have, on the emergency, taken the field without experience in, or even a theoretical knowledge of the duties and responsibilities of the military surgeon. Our national characteristic of aptness for new duties will soon fit them for their positions, and the alacrity with which our publishers have supplied us with the best literature of military surgery will facilitate the acquisition.

All who are now in the field should possess Guthrie's Commentaries on the Surgery of War, as it is the most complete record of military surgery in existence.

In the present interest in such literature, and the dearth of all other medical publishing, this work will be extensively sought after, and the profession are greatly indebted to Messrs. Lippincott & Co. for the publishing and reprinting of this and other valuable works on the subject.

Clinical Lectures on the Diseases of Women and Children. By Gunning S. Bedford, A.M., M.D., Professor of Obstetrics, the Diseases of Women and Children, and Clinical Obstetrics in the University of New York, etc. William Wood, Publisher, 389 Broadway, New York. Seventh edition, carefully revised. Price $3.25.

This work has already been favorably noticed in our pages upon its first appearance in the medical world. The publication of a seventh edition gives us occasion to reiterate the opinion of its merits we then expressed. Dr. Bedford has struck the right vein, and the rapid sale of his previous editions, together with the fact that it has received the high compliment, seldom accorded to any American work by our Transatlantic medical brethren, of a translation into French and German, is conclusive evidence of its authority as a standard work, and of a just appreciation of its merits. It is a practical work exactly adapted to the pressing wants of the practitioner, full of vivacity and life and interest from beginning to end. Its colloquial style may be at times slightly tedious and verbose, but this is amply compensated for in the clearness, certainty, and accuracy with which the diagnosis is reached, and the therapeutical principles applied in the treatment. Then, again, as with all the older practitioners of medicine, the author clings with great tenacity to certain articles of the materia medica in his treatment, which gives his practice the appearance of "routine;" but he demonstrates the utility of his own prescriptions in the successful results of his treatment. Then, again, we observe the author ignores the standard authority—the United States Dispensatory—in the nomenclature of his remedies, which, in a teacher of medicine of the present age, savors quite too much of antiquarianism. The teacher should not only be himself posted up to the day in which he lives, as we have no doubt our author is, but he should also tolerate no deficiency in this regard in his pupils. This feature of the work before us mars its beauty and symmetry. It is like a spot on a splendid painting. In a new edition we hope to see this defect remedied.

The work is neatly printed and bound, and we take pleasure in commending it to all practitioners who desire a practical work on the diseases of women and children.

On Bandaging and other Operations of Minor Surgery. By F. W. Sargent, M.D., Member of the College of Physicians of Philadelphia; one of the Surgeons to Wills' Hospital, etc. New edition, with an additional chapter on Military Surgery, by W. F. Atlee, M.D., and One Hundred and Eighty-seven Illustrations. Philadelphia: Blanchard & Lea, 1862.

The reputation this work has already acquired among practical surgeons will no doubt insure for the present edition a cordial reception. It has already become a text-book in some of our schools, and is worthy of commendation for its minute research, clear and complete rules of practice, and its many and excellent illustrations, which make it an invaluable hand-book in minor surgery. The treatise on military surgery renders the work more complete and more particularly suited to the profession at the present time. An appendix contains a list of formulæ which may prove of great practical value in answering the indications for which they are directed.

THE MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, SATURDAY, MARCH 22, 1862.

HINDRANCES TO THE STUDY OF ANATOMY.

We confess to some surprise at the action of the Guardians of the Poor of this city relative to "the safe keeping of the bodies of those dying at the Almshouse." A vault has been erected, it seems, and a superintendent has been recommended to take charge of it, and "the bodies are to be kept in the vault until decomposition has begun, so that they cannot subsequently be used by the medical profession." The plea upon which this action is based and upon which its necessity is argued is, we suppose, that of humanity; that the pauper is entitled to as much consideration, by way of protection from the dissecting knife, as the man who is favored with a more honored burial. There is some plausibility in the argument, we admit, and were it true that no regard is paid to the wishes or feelings of friends or relatives in the matter, that all paupers who die at the Almshouse are indiscriminately dissected, there would be stronger semblance of reason for the action of the Board in attempting to deprive the medical profession of a fruitful and important means of studying disease. But such is not the fact. While post-mortem examinations are sought, friends are consulted, if any are at hand, and their wishes regarded, and it is only those who have no friends whose bodies are more freely placed upon the dissecting table. With that humanity which has always characterized the profession, no feelings of sorrowing friends are outraged, nor is a post mortem ever made without permission first asked and granted. In times past a strong prejudice existed against these examinations. It was violating the sanctity of the dead. It was inflicting pain upon friends, already borne down with weighty griefs, it was said. And so strong was this feeling that an autopsy was rare; and the obstacles thus thrown in the way of those who were earnestly seeking to benefit their fellow-men, by the study of disease, may have led the more ardent and zealous in the profession to seek by stealth what public prejudice denied them, and to disturb the quiet of the grave-yard to accomplish their end.

But this prejudice among the people has died away to a great extent. By common consent, criminals from the scaffold, and paupers without friends to care for or to bury them, have been turned over to the medical profession as their particular bequest; more rational and enlightened views have prevailed relative to post-mortem examinations, and Charon's occupation, as *resurrectionist*, is gone. The importance of these examinations is now recognized, and the beneficial results which flow from them to the living are appreciated.

Hence we confess our surprise at the action of the Board as above quoted, and the more so because the Almshouse is a public institution. The physicians and surgeons who are in attendance from day to day upon the hospital, where disease in its most loathsome and revolting forms is often found, receive no pecuniary compensation for their toil or time. It is freely given for the benefit of suffering humanity, and the only return they get for their labors is the privilege of dissection, and by this becoming more serviceable to the living.

Moreover, the Board, with commendable liberality, have erected a new and commodious clinic room, the best in the city, in construction and convenience, and have offered to all students who choose to avail themselves of it, the privilege, gratuitously, of clinical lectures and of visiting the wards of the hospital. Their liberality was most largely appreciated during the college sessions just passed, as the attendance upon the clinics abundantly attested, and students left the city fully impressed with the superior advantages of the Philadelphia Hospital for clinical instruction.

The action of the Board, therefore, in thus attempting to defeat the ends of medical science by depriving the student and practitioner of an indispensable means by which a knowledge of diagnosis and therapeutics is to be gained and verified, strikes us as most singularly inconsistent. It places them in the anomalous position of having provided some of the appliances of instruction, and withheld the most important. As well might they lock the doors of the anatomical museum now gathering there, or of the large and valuable library which they are now fitting up for the examination of visitors, or shut out the attending physicians from the hospital wards, and require them to prescribe for the patients without seeing them, or to understand medical science without a book or a morbid specimen. And the one would be quite as consistent as the other.

But we would not judge the Board harshly. The reason for their action, inconsistent as it appears with their former liberality in other matters, may not be apparent to us. Some improprieties, or indelicacies, or indiscretions, may have been the proper basis of *some* action in the premises. It cannot be their intention to cut off entirely a source from whence the medical schools of the city are supplied with material for dissection.

Their action can hardly be other than a temporary bending to popular clamor, which will soon lose its potency by exhausting its wind.

If, however, it be said that the Board are carrying into operation the law of the State, which is stringent against the exhumation of bodies for purposes of dissection, we can appreciate their law-abiding spirit, and honor them for its exhibition; but, at the same time, we would suggest that the law is intended as a protection to those who are actually buried, to secure the new-made grave from desecration, and is in nowise broken or annulled by the transfer of the body of any unclaimed pauper or criminal to the dissecting-table before it is honored with the rites of burial. Nay, more, the action of the Board, fully enforced, will destroy the very intent of the law, and re-enact the horrors of the infamous resurrectionist. If, however, this view of the Board be correct, and their action is only in accordance with the law of the State, it becomes an important matter to appeal to the Legislature for a dissecting law, authorizing the bodies of criminals and of paupers who have no friends to claim them for burial to be transferred to the medical schools and profession. Medicine and surgery will be studied. The spirit of investigation into the nature of disease, and the principles and practice of surgery, is aroused, and will be prosecuted. No hindrance should be interposed to stay its progress. The interests of humanity demand here the utmost liberty consistent with sound discretion. We trust, therefore, the Board will carefully re-examine their action with a view to determine whether it be not unnecessarily stringent, and whether a due regard to the welfare of humanity and the interests of our city, which is, and must continue to be, the great center of medical instruction, do not require a modification, if not a repeal, of the rule they have adopted.

EDITORIAL NOTES AND COMMENTS.

University of Pennsylvania, Medical Department.—The annual commencement of this institution took place on Thursday of last week, at the Musical Fund Hall, which was densely packed at an early hour. A large proportion of the audience were ladies. The Germania Orchestra was in attendance, and discoursed some excellent music. A procession, consisting of the Trustees of the University, Faculty, Graduates, and invited guests, was formed at the college and marched to the Hall, where all, save the graduates, took seats upon the platform. The exercises were opened with prayer by Rev. Dr. Schaeffer. The degree of Doctoris in Medicinæ was then conferred in terse Latin phraseology upon the following gentlemen, by Rev. Daniel R. Goodwin, D.D., Provost of the University:—

John Aiken, Pa.; W. D. Bailey, Pa.; John Barber, Pa.; D. H. Bartine, Pa.; Daniel T. Batdorf, Pa.; Thomas T. Beveridge, N. B.; John J. Black, Del.; William R. D. Blackwood, Pa.; C. H. Boardman, Pa.; Lucius S. Bolles, R. I.; S. P. Boyer, Pa.; Geo. F. Brendle, Pa.; J. Morris Brown, Ohio; W. J. H. Bruch, N. J.; James A. Buchanan, Jr., Pa.; Wm. F. Buchanan, Pa.; Wm. H. Campbell, Pa.; George G. Carll, N. J.; Richard A. Cleemann, Pa.; Jas. M. Clement, Md.; Ezra Comley, Jr., Pa.; George B. Dexter, Nova Scotia; George H. Dick, Pa.; Robert Dickey, Pa.; E. L. Dieffenderfer, Pa.; Edward Dodd, N. Y.; Henry A. Drane, Pa.; Thomas M. Drown, Pa.; Frank L. Dubois, Pa.; H. C. Eckstein, Pa.; John Flynn, Pa.; Edward A. Frink, Me.; J. R. Gibson, Pa.; Jas. M. Good, Pa.; Henry S. Gross, Pa.; Edward F. Guth, Pa.; N. F. Hallman, Pa.; D. Claude Handy, Md.; Napoleon Hickman, Del.; Lloyd W. Hixon, Mass.; Silas P. Holbrook, Mass.; J. A. Jack, Pa.; W. H. Johnson, Pa.; J. H. Kauffman, Pa.; Lucien H. Kendall, Pa.; Robert D. King, Nova Scotia; Harvey Kratz, Pa.; John A. Laros, Pa.; Abia H. Light, U. S. A.; Manoah S. Long, Pa.; Abraham Mass, Pa.; Montrose M. Magoffin, Pa.; J. A. McBride, Pa.; Allan A. McClure, W. I.; Danl. McMurtrie, Pa.; Wm. C. Merillat, Va.; P. Middleton, Pa.; Saml. N. Miles, N. B.; S. J. Fergus Miller, Ohio; Geo. W. Nebinger, Pa.; Hiram J. Noyes, Mass.; J. H. Nonamaker, Pa.; Gerald D. O'Farrell, Pa.; Chas. Orendorff, Illinois; Samuel H. Peltz, Pa.; Philip M. Plunkett, Del.; Silas Purdy, N. S.; Jno. A. Raub, N. J.; John M. Rice, Pa.; J. G. Richardson, Pa.; M. C. B. Richardson, N. C.; Jacob Roberts, U. S. A.; Charles M. Robinson, Pa.; Richard R. Rogers, N. J.; S. W. Ruch, Pa.; John J. Saville, Colorado Ter.; Robert G. Sawyer, West Indies; John H. Saylor, Ohio; Adam

Shirk, Pa.; T. W. T. Smith, England; Matthew Stovell, Pa.; Charles Styer, Pa.; Joseph Taylor, Pa.; Richard Thomas, Jr., N. J.; James Reeve Todd, West Indies; A. S. Townshend, Nova Scotia; A. Paul Turner, Ind.; H. R. Wodel, Minn.; Thomas Welsh, Jr., Md.; Horatio C. Wood, Jr., Pa.; I. Gilbert Young, Pa.; J. Watson Young, N. J.

The list foots up ninety-one, which is a considerable decrease from the commencement of last year. The different States were represented as follows:—

Pennsylvania, 52; New Jersey, 6; New Brunswick, 2; Maryland, 3; New York, 1; Massachusetts, 3; West Indies, 3; Illinois, 1; Colorado Territory, 1; Indiana, 1; Delaware, 3; Rhode Island, 1; Ohio, 3; Nova Scotia, 4; Maine, 1; U. S. A., 2; Virginia, 1; North Carolina, 1; England, 1; Minnesota, 1.

Many of the graduates were the recipients of choice bouquets from their friends. The valedictory address was delivered by Joseph Leidy, M.D., Professor of Anatomy. He commenced by remarking that the sight of a diminished class made him think of the troubles that now engrossed our land. The present occasion is full of significance to you, both as men and in your profession. Three years have elapsed since you commenced your studies, and to-day they are crowned with success. It is with anxious heart that we witness your advent into the scenes of your future labors. You must encounter the common temptations of life, both internal and external. The very nature of your office will be misrepresented. It seems a common idea that a physician can be able to prevent death, no matter under what circumstances he labors. Gratitude will not always be enjoyed by you. You will rather encounter the opposite feeling, and the poor will often be your worst censors.

The physician, as a general thing, enjoys a good education, which qualifies him for any society, and his intercourse gives him a welcome, even when his services in the healing art are not required. He occupies the place of a confidential friend. You will oftener succeed than fail in your endeavors for the patient, and from the majority you will receive thanks for their escape from disease or death.

The best wishes of the faculty will follow you from the present moment, and in this confidence we bid you a hearty and respectful farewell. The speaker concluded his address amid much applause.

Philadelphia College of Pharmacy.—The annual commencement of this institution occurred on Thursday evening; also at the Musical Fund Hall. Previous to the opening of the exercises, a beautiful oil painting of Dr. Jackson, of the University of Pennsylvania, was presented to the college by the "Zeta Phi Society," composed of the second graduating class of the institution. The presentation took place in one of the committee-rooms at the Hall.

The degree of Graduate of Pharmacy was conferred upon the following gentlemen by the President, they having passed a thorough examination, and been approved by the Board of Trustees:—

William M. Allen, Philadelphia; Henry Blithe, Montgomery, Pa.; Albert P. Brown, Philadelphia, Pa.; W. G. Buchanan, Philadelphia, Pa.; Edward D. Chipman, Frankford, Pa.; Charles D. Collom, Philadelphia, Pa.; William H. Cooper, Greensboro, Md.; Robert W. Dickson, Philadelphia, Pa.; C. Lewis Diehl, Chicago, Illinois; Edward T. Dobbins, Philadelphia, Pa.; Marcus C. Fetter, Bethlehem, Pa.; Theophilus Fischer, Philadelphia, Pa.; Richard T. Hand, Cape May, N. J.; George Hansell, Rancocas, N. J.; Molton E. Hornbeck, Allentown, Pa.; Henry H. Jacobs, Philadelphia, Pa.; Henry W. Leslie, Pa.; Adolph W. Miller, Saint Paul, Minnesota; Wesley W. Mullen, Philadelphia, Pa.; William D. Naulty, Philadelphia, Pa.; George R. Parry, Philadelphia, Pa.; H. T. Peck, Philadelphia, Pa.; T. A. Rex, Philadelphia, Pa.; Christian Schmidt, Baltimore, Md.; Theodore A. St. Clair, Philadelphia, Pa.; Jacob Senneff, Philadelphia, Pa.; Richard M. Shoemaker, Philadelphia, Pa.; Bennet L. Smedley, Delaware County, Pa.; George M. Smyser, York, Pa.; Clayton N. Wills, Rancocas, N. J.; David L. Wilmer, Philadelphia, Pa.

The graduates of this college were not forgotten by their lady friends in the presentation of beautiful bouquets. The valedictory address was delivered by Prof. Robert Bridges, M.D. It was a scientific production.

Iced Bath in Delirium Tremens.—A practitioner in New York City has been experimenting with a patient suffering from delirium tremens, with, what seems to us, a cruel, and, in a scientific view, unwarranted treatment.

A patient presenting ordinary violent symptoms of delirium tremens, after being left for several days without treatment, was plunged into a bath of ice and water. At the expiration of nine minutes he is reported to have been "perfectly quiet," and was removed. In about four and a half hours the delirium returned, and after some time longer he was again placed in the iced bath. He was this time kept in the bath for twelve minutes, and was then removed, as the report says, "on the verge of syncope and gasping." The pulse had fallen from 82 to 50. The patient lived through this terrible treatment, and it is said that the delirium did not return.

In most institutions where delirium tremens is continually under treatment, but little medication is practiced; and restraint, with rest in darkness, and occasionally some stimulants, narcotics, nauseants, etc., make a favorable termination in nearly all uncomplicated cases.

It is hoped that the above-noticed violent and inhumane treatment will not be repeated.

Large Doses of Quinia in Typhoid Fever.—Dr. C. P. Harrington, of Ashland, Pa., writes us as follows relative to the administration of this drug in typhoid fever. He says:—

"My mode when first called to a patient is to prescribe sixteen grains of the sulphate to begin in the morning, and so on every other day for eight or ten days. During the remission I usually give from four to eight grains, [per day?] according to age and strength of my patient. In the mean time, if the bowels become loose, I give argenti nitras in one-fourth grain doses every four hours, in combination with one-eighth of morphia sulph. If the tongue becomes black and dry I give ten to fifteen drops of ol. terebinth. every four hours; and, as a general rule, my patients are out of bed in about two weeks. I think there is no doubt but that quinia will cut short an attack of typhoid fever, if the physician will pay strict attention to its remissions."

Etherization in Epileptic Convulsions.—Dr. I. Farrar, of Brooklyn, sends us notes of a case in which etherization proved successful in this malady. The patient, aged thirty-three, married, extremely plethoric, was attacked with epileptic convulsions four days prior to her confinement, (primipara.) The paroxysms were quite severe and occurred at intervals of only a few minutes. After administering about three fluid drachms of a compound of ether two parts, with chloroform one, in small quantities at a time dropped upon a napkin, she came out of the "fit," but in a few moments went into another. Venesection was then proposed, but the husband remonstrated, declaring "that she should die in a fit before she should be bled to death." Blood-letting was not insisted upon, but the patient was kept under the influence of etherization for twenty-six hours, when she recovered; and at the expiration of four days from the attack gave birth to a full-time, healthy child. Both mother and child are doing well. Albuminuria and constipation were ascertained to be the principal causes of the convulsions, and the usual remedies were resorted to for these affections.

Naval Medical Board.—The annual examination of candidates for admission into the medical corps of the navy commenced on Monday last, at the Naval Asylum, on Gray's Ferry Road. Fourteen were examined at the first session.

The examiners are Surgeons Green, Wheeler, and Johnson. It is probable the examination will last for two months. Applicants are required to be not less than twenty-one nor more than twenty-six years of age.

Correspondence.

NEW YORK CORRESPONDENCE.

"Ohne Hast, aber ohne Rast."—GÖTHE'S RING.

This has been an eventful week in the busy city of Gotham. Several Commencments have taken place, and though the general average of graduates has been below the accustomed number, we are at liberty to trust that quality will supply the deficiency of quantity. The present state of our distracted country, though rapidly becoming ameliorated under the wise and judicious administration of an athletic "*Monitor*," has, in no small degree, deminished the number of students, especially those of medicine in this metropolis. The University Medical College, whose Mott and Draper, Paine and Metcalfe, Van Buren and Post, sufficiently indoctrinate the young in the mysteries of physiological and pathological lore, has suffered probably more than any other Nothern institution of a similar character. Yet the number of graduates this year is *sixty-five*. The Southern followers of Hippocrates almost invariably were wont to enter its walls and embrace the gratifying opportunities of acquiring solid information. I trust ere many suns decline upon the thoughtful vision, the usual number of enthusiasts will recompense the labors of such energetic lecturers. The number of graduates from the New York Medical College, for this session, was eleven. Dr. Percey, a man of parts, delivered the annual address. Like those of its predecessors, it was listened to with interest, bore the marks of thought and a good mental digestion, and met with the approbation of those who were the favored listeners.

Dr. Van Buren's discourse before the students of Fourteenth College, of a similar mould as his own organization, gratified those who attended, repaid the diligent aspirant, warned the thoughtless trifler with a human life, and cheered on the man of studies to a proper and appreciative view of ethical practice.

The twenty-eight graduates of Bellevue Hospital College enjoyed the privilege of "Irving Hall" as their birth-place for fame, and became the blest recipients of practical truths from "Simeon," the Draper who cuts his coat according to his cloth; the axiomatic eloquence of versatile Dr. Chapin; and the mellifluous accents of æsthetic Elliott, the pleasing combination of

practitioner, gentleman, and honorable citizen. "Pax vobiscum." This institution cannot fail to succeed. Its advantages are inestimable!

Twenty-third Street, or rather the College of Physicians and Surgeons, that can boast of a Dalton — chemical philosopher and patriotic follower of "Constitutional" Hygiene — brought forth some fifty students of acknowledged merit. Rare opportunities are now afforded those who can avail themselves of army privileges.

Gourmet.

NEWS AND MISCELLANY.

American Medical Association.—The delegates to this Association from this city, upon consultation, have come to the conclusion to advise that no meeting of the Association be held at Chicago the present year, as the Southern States would not probably be represented. We are pleased to find our position upon the subject so emphatically indorsed.

Philadelphia Hospital.—The examination of candidates for resident physicians of this hospital took place on Monday evening at the office of the Guardians of the Poor. Some twenty presented themselves, of whom eight will be appointed.

Dr. Edgar Holden, of Newark, N. J., is one of the surgeons on board of the U. S. ship Minnesota recently engaged in the action in Hampton Roads.

Sick and Wounded at Newport News.—The number under medical treatment on the 15th instant at this place was: In camp hospital, 48; in quarters, 72; transferred to Fortress Monroe, 13; in all, 133. This does not include the sailors wounded during the late naval engagement.

Mortality in the Army of the Potomac.—The most exaggerated statements have been made, by the President of the Sanitary Commission and others, in regard to the number of deaths per month in the army of the Potomac. The number has been stated at 2000. Official statements show the following to be the facts: The number of deaths among the regulars stationed at Washington, for the quarter ending with March, 1861, was 28; for that ending with June, 33 regulars and 46 volunteers; for that ending with September, 56 regulars and 749 volunteers; for that ending with December, 108 regulars and 2970 volunteers. Total, 3990, of which 100 were from wounds. This includes returns from 257 regiments.

The Oil Wells of Pennsylvania.—The amount of oil now being raised from the oil wells of Pennsylvania is astounding — 250,000 barrels weekly, or 13,000,000 barrels a year. If all issued from one well, nearly half a barrel would be thrown out every second, and the whole discharge would fill a lake two miles long and ten feet deep. This enormous amount, which almost bewilders the mind in the attempt to grasp its huge dimensions, it is said may be indefinitely increased. This oil has, to some extent, been used as a medicine for both internal and external use, under the name of Rock oil. Its therapeutic uses, save as a stimulant of a peculiar nature in certain cases, are not extensive.

One hundred of the sick and wounded of the Burnside Expedition arrived at New York last week, under the charge of Dr. Hitchcock, of Mass.

The Legislature of New York have passed a stringent law against the adulteration of, and to prevent the traffic in, impure and unwholesome milk. The penalty is fifty dollars fine, or imprisonment thirty days in the penitentiary or county jail for the adulteration, and one hundred dollars fine, or imprisonment, in the discretion of the court, or both, for the traffic. The law is a good one, and eminently necessary in a hygienic point of view, no doubt; but will it be enforced?

Nature of Wounds received in the Naval Engagement with the Merrimac.—A surgeon, who was on board of the Cumberland in its late engagement with the Merrimac, says: "The number of wounded was unusually small in comparison with the number killed outright. The fire of the *Merrimac* was too close, and so fearful that almost every man who was struck at all was killed. Neither were the wounds themselves of the ordinary character. They almost invariably took off the head and one shoulder, or cut the body directly in two. The only insignificant wound which I dressed was in the case of one of the crew who had his hand taken off. Mr. Rhodes, who was among the last killed, died after we had reached the shore, from the effects of a concussion he had received, and his body not being at all mangled. He was a stout, robust man of fifty, and a strong, active sailor. Com. Pendergrast did not receive a single scratch, although exposed to the full danger. I came off in the same boat with him. After fifteen or twenty minutes I did not pretend to amputate a limb, as the number of the wounded was so great, and their suffering so terrible. I put on tourniquets to stop the hemorrhage, however, and administered draughts to prevent prostration. The scene on the gun-deck was frightful. Many of the dead had been literally blown to pieces, and yet the living, unconscious how soon their own turn might come, seemed also unconsious of danger, and moved about with the greatest coolness."

DIED.

Cook.—At Hackettstown, N. J., on the 10th inst., Mrs. Janet Cook, wife of Dr. L. C. Cook, and daughter of the late Wm. Hall, of New York City.

Scott.—In Astoria, L. I., on Saturday morning, March 15th, Jane Heyer, wife of John W. Scott, M.D., of Astoria, and eldest daughter of the late Cornelius R. Suydam, Esq., of New York, aged thirty-nine years.